

**EMBRYOLOGY MCQ FOR
INTERCALATED AUGUST 2021**

Attempt ALL questions in this section

The cardiovascular system is derived mainly from the following EXCEPT:

- A. Splanchnic endoderm, which forms the primordium of the heart
- B. Paraxial mesoderm near the otic placodes from which the internal ears develop
- C. Neural crest cells from the region between the otic vesicles and the caudal limits of the third pair of somites
- D. lateral mesoderm near the otic placodes from which the internal ears develop

Which of the following statements is NOT correct?

- A. A 6-week old embryo has two umbilical veins
- B. The posterior cardinal veins drain poorly oxygenated blood from the caudal end of the embryo into the common cardinal vein
- C. Blood is supplied to the yolk sac by the vitelline vein
- D. The umbilical veins run on each side of the liver and carry well-oxygenated blood from the placenta to the sinus venosus in a 5-week old embryo

One of the followings is NOT correct during partitioning of the heart:

- A. The ventral and dorsal atrioventricular endocardial cushions fuse in the 5th week of embryonic development
- B. Apoptotic perforations in the septum secundum coalesce to form the foramen secundum
- C. The valve of oval foramen fuses completely with septum secundum approximately 3 months after birth

- D. The interventricular septum is formed from both ventricular floor and the endocardial cushions

Which of the following statements is CORRECT during the development of the epidermis?

- A. The stratum corneum becomes a component of vernix caseosa
- B. The stratum germinativum develops from the mesoderm
- C. The intermediate layer is as a result of proliferations from the stratum germinativum
- D. The subcutaneous ridges produce grooves on the surface of the palms, the soles and digits serve as a basis of genetically unique fingerprint patterns

One of the following statements is NOT correct:

- A. Athelia is a congenital abnormality of the nipple
- B. Localized hypertrichosis is often associated with spina bifida occulta
- C. Development of fingernails precedes that of toenails by approximately 4 weeks
- D. The dermis can be bypassed in the nourishment of the developing epidermis

All of the followings are derivatives of the foregut and its tissues EXCEPT:

- A. Kidneys
- B. Spleen
- C. Gall Bladder
- D. Pancreas

All of the followings are derivatives of the midgut and its tissues EXCEPT:

- A. Pyloroduodenal junction
- B. Proximal one half to two thirds of the transverse colon
- C. Jejunum
- D. Vermiform appendix

All of the followings are derivatives of the hindgut and its tissues EXCEPT:

- A. Descending colon
- B. Distal one third to one half of the transverse colon
- C. Rectum
- D. Distal 1/3rd of anal canal

The first major system to start functioning in a developing embryo is:

- A. Respiratory system
- B. Cardiovascular system
- C. Integumentary system
- D. Gastrointestinal system

The Sinus Venosus receives the followings EXCEPT:

- A. Umbilical veins, from the chorion
- B. Vitelline veins, from the umbilical vesicle
- C. Aortic veins, from the yolk sac
- D. Common cardinal veins, from the embryo

Which of the following statements is NOT CORRECT about partitioning of the atrioventricular canal, primordial atrium, and ventricle?

- A. It begins around the middle of the fourth week
- B. It is essentially completed by the end of the fifth week.
- C. Although described separately, these processes occur concurrently
- D. Toward the end of the fourth week, endocardial cushions form on the dorsal and ventral walls of the atrioventricular (AV) canal

Tetralogy of Fallot includes the following defects EXCEPT:

- A. Pulmonary stenosis (obstruction of right ventricular outflow)
- B. Atrial Septal Defect
- C. Dextroposition of aorta (overriding or straddling aorta)
- D. Right ventricular hypertrophy

Which of the followings is structurally NOT an integument?

- A. Tongue

- B. Teeth
- C. Nails
- D. Breast

One of the followings is NOT CORRECT about the respiratory system:

- A. The respiratory system develop from a median diverticulum of the foregut (endoderm).
- B. The diverticulum divides into right and left lung buds.
- C. The larynx and trachea develop below the division of diverticulum
- D. The lung buds undergo repeated division to establish the bronchial tree and alveoli of the lung

One of the following derivatives is NOT supplied by the superior mesenteric artery?

- A. Jejunum
- B. Descending colon
- C. Ascending colon
- D. Appendix

One of the following derivatives is NOT supplied by the inferior mesenteric artery?

- A. Rectum
- B. Descending colon
- C. Distal half or 1/3rd of the transverse colon
- D. Proximal half or 2/3rd of the transverse colon

The celiac trunk supplies one of the following derivatives:

- A. Appendix
- B. Jejunum
- C. Stomach
- D. Ileum

The most common anomaly of the lower respiratory tract is:

- A. Tracheoesophageal Fistula
- B. Laryngotracheoesophageal Cleft
- C. Tracheal Diverticulum
- D. Oligohydramnios

One of this is NOT CORRECT about the partitioning of the ventricles:

- A. The muscular part of the interventricular septum is derived from the endocardial cushion
- B. The membranous part of the interventricular septum is the weakest
- C. Perforations in the muscular part of the interventricular septum can also be a rare type of VSD
- D. The absence of a ventricular septum results in a three-chambered heart

In the placenta, which of the following is NOT CORRECT?

- A. There is a direct mixing of blood between the maternal and the embryonic blood vessels
- B. The umbilical artery supplies into the umbilical veins in the placenta to return blood to the embryo
- C. Gaseous and nutrient exchange is mainly by diffusion
- D. The placenta has two components that develops from the chorionic sac and maternal endometrium

One of these is a derivative of the hindgut:

- A. Vermiform Appendix
- B. Proximal half or 2/3rd of Transverse colon
- C. Distal half or 1/3rd of transverse colon
- D. Ileum

One of these is a derivative of the midgut:

- A. Distal duodenum after pancreatic duct ampulla
- B. Proximal part of duodenum before the entrance of pancreatic duct
- C. Pyloroduodenal junction
- D. Liver

One of these is NOT an anomaly of the integumentary system:

- A. Kyphosis
- B. Ichthyosis
- C. Polymastia
- D. Albinism

In Tetralogy of Fallot, supply of poorly oxygenated blood to the body of embryo from the heart results mainly from which of the following:

- A. Pulmonary stenosis
- B. Overriding aorta
- C. Ventricular hypertrophy
- D. Ventricular septal defect

Which part of these atria and ventricular septa is the weakest and most prone to be defective?

- A. Oval fossa of the Atrial septum
- B. Septum primum of the Atrial septum
- C. Membranous part of the Ventricular septum
- D. Muscular part of the Ventricular septum

One of the following statements is NOT CORRECT:

- A. Lateral embryonic folding is mainly responsible for the fusion of two cardiac tubes into a single one
- B. The fusion of the two cardiac tubes is first completed cranially before the caudal part
- C. This single heart tube has only one chamber till birth
- D. The position of the apex of heart can be mirrored in some cases

The most powerful chamber of the heart is:

- A. Right Ventricle
- B. Right Atrium
- C. Left Ventricle
- D. Left Atrium

The venae cavae develop from which of the followings?

- A. Bulbus cordis
- B. Sinus venosus
- C. Truncus arteriosus
- D. Primitive ventricle

The Ascending Aorta develops from:

- A. Bulbus cordis
- B. Sinus venosus

- C. Truncus arteriosus
- D. Primitive ventricle

The Right ventricle develops from:

- A. Bulbus cordis
- B. Sinus venosus
- C. Truncus arteriosus
- D. Primitive ventricle

The small intestine is fixed to the posterior abdominal wall by:

- A. Ligaments
- B. Tendons
- C. Mesenteries
- D. Joints

The structure mass present in the centre of a primordial heart tube to which the septum primum and membranous interventricular septum attach to is called:

- A. Cardiac mesenchyme
- B. Endocardial cushion
- C. Internal cushion
- D. Cardiac mass

Which of the followings is exfoliated from the surface of the developing epidermis, to become added to vernix caseosa?

- A. Ectoderm
- B. Periderm
- C. Mesoderm
- D. Endoderm

The cheesy, whitish substance seen on a newly born baby is known as:

- A. Varnish Caseosa
- B. Varnix Casiosa
- C. Vernix Caseosa
- D. Varnish Casiosa

One of these is NOT a function of vernix caseosa:

- A. Easy of delivery of fetus at term
- B. Protection of fetal skin from high urine content of the amniotic fluid
- C. Glossy appearance of fetus
- D. Development of epidermal ridges

One of these is not a layer of the epidermis:

- A. Stratum lucidum

- B. Stratum basalis
- C. Stratum granulosum
- D. Stratum cornea

The layer that contains melanocytes in the epidermis is:

- A. Stratum lucidum
- B. Stratum germinativum
- C. Stratum granulosum
- D. Stratum cornea

The outermost layer of the epidermis is:

- A. Stratum granulosum
- B. Stratum corneum
- C. Stratum germinativum
- D. Stratum lucidum

All layers of the epidermis are produced from which of these layers?

- A. Stratum granulosum
- B. Stratum corneum
- C. Stratum germinativum
- D. Stratum lucidum

Epidermal ridges are formed by proliferating cells of which layer?

- A. Stratum lucidum
- B. Stratum basalis
- C. Stratum granulosum
- D. Stratum cornea

Patterns on Fingerprints, Palm prints, prints of sole and toes are all derived from the pattern formed by:

- A. Dermal Ridges
- B. Epidermal Ridges
- C. Ectodermal Ridges
- D. Endodermal Ridges

One of these statements is NOT

CORRECT:

- A. Epidermis is derived from the surface ectoderm
- B. Dermis is derived from underlying endoderm
- C. Fingerprint patterns are uniquely established in individuals by epidermal ridges

- D. Fingerprint patterns are uniquely established in individuals by dermal ridges

One of these is NOT CORRECT about albinos:

- A. They lack melanin
- B. They lack melanocytes
- C. They may have melanin but in small amounts
- D. They have melanocytes

Which of these veins drain the umbilical vesicles?

- A. Vitelline veins
- B. Umbilical veins
- C. Anterior cardinal veins
- D. Posterior cardinal veins

Which of these veins return blood from the placenta to the embryo?

- A. Vitelline veins
- B. Umbilical veins
- C. Anterior cardinal veins
- D. Posterior cardinal veins

Which of these veins drain the cranial end of the embryo?

- A. Vitelline veins
- B. Umbilical veins
- C. Anterior cardinal veins
- D. Posterior cardinal veins

Which of these veins drain the caudal end of the embryo?

- A. Vitelline veins
- B. Umbilical veins
- C. Anterior cardinal veins
- D. Posterior cardinal veins

Which of these veins transports richly oxygenated blood?

- A. Vitelline veins
- B. Umbilical veins
- C. Anterior cardinal veins
- D. Posterior cardinal veins

Which of the following systems is the first to start function in embryos?

- A. Integumentary system
- B. Respiratory system

- C. Cardiovascular system

- D. Urogenital system

One of the following statements is NOT correct:

- A. Amastia is a congenital abnormality of the nipple
- B. Localized hypertrichosis is often associated with spina bifida occulta
- C. Development of fingernails precedes that of toenails by approximately 4 weeks
- D. The dermis cannot be bypassed in the nourishment of the developing epidermis